

Office Action Summary	Application No. 10/563,886	Applicant(s) KESKI-NISULA, KATRI
	Examiner YOGESH P. PATEL	Art Unit 4111

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 18 May 2006.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-27 is/are pending in the application.

4a) Of the above claim(s) 25-27 is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-24 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 09 January 2006 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1668)
Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____

5) Notice of Informal Patent Application

6) Other: _____

3. During a telephone conversation with Dippert William on 12/12/2007 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-24. Affirmation of this election must be made by applicant in replying to this Office action. Claims 25-27 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

4. The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result**

in a loss of the right to rejoinder. Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-23, 25-27 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-25 of copending Application No. 10/563, 894. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of '894 are more specific than the claims of '886 and thereby anticipate the claims of '886.

Art Unit: 4111

10/563 886	10/563894
Claim 1 requires	is obvious to claims 1
a generally U-shaped arch that has a lower surface on the lower jaw side and an upper surface on the upper jaw side	a generally U-shaped arch that has a lower surface on the lower upper surface on the upper jaw side
the bottoms of the concaves forming an isthmus separating the concaves and the walls of the concaves are formed by the outer walls on the labial or buccal side and inner wall arranged on the opposite sides of the concaves on the lingual side.	the bottoms of the concaves forming an isthmus which separate from one another. It is noted that although '894 is silent about walls, the presence of an upper surface and a lower surface with receiving individual teeth wherein the bottoms of the concaves an isthmus, requires outer and inner walls wherein the outer wall the buccal side and the inner walls on the lingual side due to the structure of the appliance.
the isthmus between the concaves having recesses for individual teeth	the isthmus includes blanks, as taken to be recesses for individual teeth.
the recesses consist of uniform compartments, which start from second premolar and continue toward the molars	The recesses contain uniform compartment that begin from the second premolar and continue towards molars as in claim 2.
Claim 2 side walls of the uniform compartments are formed by outer and inner walls, having essentially straight walls.	As in claim 3, the side walls of the uniform compartments are formed by outer and inner walls, having essentially straight walls.
similarly claims 3-10 are not patentably distinct from	respective claims 4-10 because they require same structure as worded.
Claims 11-23 are identical to	respective claims 11-23
Claims 25-27 are not patentably distinct from	Claims 24-25 because the combination of these requires same structure.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Drawings

7. The drawings are objected to because in figure 1, element 14 is not properly pointing at the intended structure. Appropriate correction is required.

8. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4).

Applicant has used inconsistent reference numerals throughout the specification for claimed elements and are too numerous to list. For example reference character "5a"

has been used to designate both side wall and outer wall. The objection to the drawings will not be held in abeyance.

9. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

10. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. **It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited.** The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

example, consistent terminology has not been used for the side walls, the outer walls, the inner walls and the front walls (e.g. 4a, 5a, 4b, 5b) of the dental appliance.

16. The cross-reference(s) to related applications, if any, should be in the first sentence of the specification. Appropriate correction is required.

Claim Objections

17. Claims 1-24 are objected to for following informalities:

Regarding claims 1 and 19, it is noted that the recesses for the back teeth are not disclosed in the specification. The recesses are identified as blanks in the disclosure, which refer to elements 6a, 6b, 6c and 6d in figure 1. The appropriate terms as they are used in the disclosure should be used in the claim limitations. Corrections required.

Claim Rejections -112 Paragraph

18. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

19. Claims 1-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner notes that the claims are replete with elements that lack the antecedent basis. For example, Claims 1 and 19 recites the limitation "the bottom of the mentioned concaves" and "the walls." There is insufficient antecedent basis for this limitation in the claim and further Claim 2 recites the limitation

"wherein the side walls of the mentioned uniform compartments." There is insufficient antecedent basis for this limitation in the claim. The claims as presently recited are replete with 112 2nd paragraph issues making it extremely difficult to proper scope of the claims. It is strongly suggested for Applicant to amend all claims to make them conform to the US claim drafting practice.

Claim Rejections - 35 USC § 102

20. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

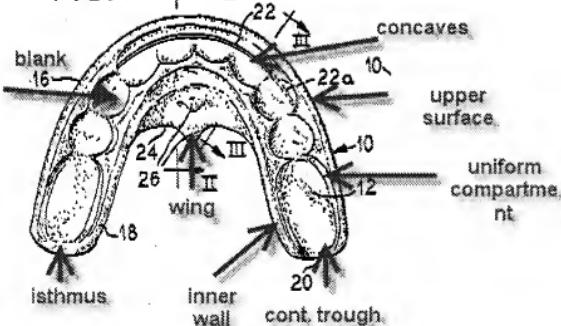
21. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Bergersen (Pat. 4,784,605).

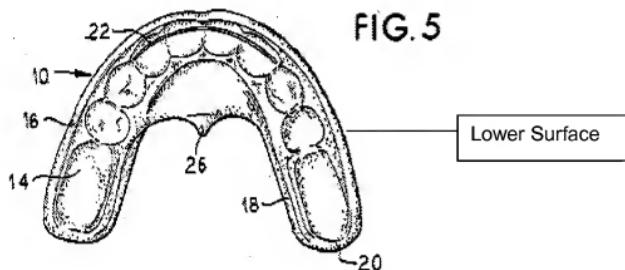
Regarding claim 1, Bergersen discloses an odontological device including a generally U-shaped arch that has a lower surface on the lower jaw side and an upper surface on the upper jaw side, and concaves forming an isthmus separating the concaves and the walls of the concaves are formed by the outer walls on the labial or buccal side, respectively, and of inner walls arranged on the opposite sides of the concaves on the lingual side of the tongue; the isthmus between the concaves having recesses, a part of which are meant for individual teeth, wherein the recesses consist of uniform compartments, which start from the second premolar and continue towards the molars at least partially to the area where the second permanent molar will erupt (see the figures below). Regarding claim 2, Bergersen discloses uniform compartments that are

formed by outer and correspondingly inner walls, which have essentially straight walls (see figures below). Regarding claim 3, Bergersen discloses the uniform compartments are shaped like continuous troughs 12, and the troughs are open from the molar side end (see the figures below). Regarding claim 4 Bergersen discloses the recesses contain limited to the area of the front teeth, and the walls of the recesses are essentially smooth-surfaced (col. 2, lines 35-40). Regarding claim 5, Bergersen discloses the concaves have their own blanks for canine teeth and the first premolars (see the figures below).



FIG. 1





Claim Rejections - 35 USC § 103

22. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

23. Claims 6-8 and 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergersen'605 as applied to claim 1 above, and further in view of Bergersen (Pat. 5,645,420).

Regarding claims 6 -8, Bergersen'605 discloses all elements of the claimed invention except for a thickness of the isthmus.

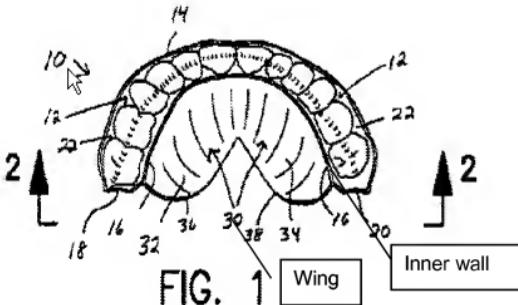
Bergersen '420 teaches many arrangements may be incorporated in a dental appliance to address different problems by varying the thickness of the isthmus (col. 6, lines 49-57). For example, for overbite corrections, a thickness of the isthmus increases at the anterior region relative to the posterior region as compared with the normal occlusion

design would optimally be between 4 to 5 mm thereby causing the anterior teeth to be depressed 1 to 2 mm before contact of the posterior teeth is possible. Similarly, by increasing the thickness of the isthmus in the posterior region relative to the anterior region, an open bite can be corrected. The variation in thickness of the isthmus is occurs in step because the thickness is different in anterior and posterior portions. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to have provided a varying thickness of the isthmus of the device as taught by Bergersen'420 to the orthodontic device of Bergersen to correct open bite and overbite problems (col. 6, lines 49-67 and col. 7, lines 19-42).

Regarding claims 18 -23, Bergersen'605 discloses all elements of the claimed invention except for the measurements of the appliance(s).

Bergersen'420 teaches a series of differently sized orthodontic appliances which are each preformed to be generally in U-shapes (claims 32-36). Further, the dental structure of users (e.g. dentition) varies in sizes depending on particular users' age. For example, if the user is 5 years old, then the length of the compartment would be lesser than the compartment length for user that is older than specified age and vise versa. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to have provided the appliance in variety of sizes (e.g. as claimed) as taught by Bergersen'420 to the dental appliance of Bergersen'605 so that large group of users may benefit from correcting open-bite tendencies and tongue thrust problems using the appliance.

24. Claims 9-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergersen'605 as applied to claim 1 above, and further in view of DeLuke (Pat. 6,837,246).



Bergersen'605 discloses all elements of the claimed invention except for an inner wall on the side of the lower jaw forms a wing constricting the tongue at least sideways. DeLuke teaches a dental appliance having the inner wall on the side of the lower jaw forms a wing constricting the tongue at least sideways; the wing is shaped to help keep the device firmly in place in the individual's mouth (abstract). Regarding claim 10 DeLuke teaches the wing has been continued at least essentially aligned downwards with the surface of the inner wall that it extends lower than the corresponding outer wall (fig. 1-3). Regarding claim 11 DeLuke teaches the wing has been arranged so as to reach the immediate proximity of the base of the mouth cavity (fig. 1). Regarding claim 12 DeLuke teaches shape of the lower wing, particularly in the molar area, follows essentially the shape of the lower side jaw arch (fig. 1). Regarding claims 13 and 14

DeLuke teaches the downwards dimension of the wing has been reduced at the point of the ligament of the tongue (fig. 1). DeLuke does not explicitly teach lower wing extends approximately at the point of the first molar to a distance of 14 mm as a maximum of the down side surface of the isthmus, in which case the distance is approximately 3 to 6 mm smaller in the area of the ligament of the tongue, however the figures clearly shows that the wing is reduced at the point of the ligament of tongue. If the wing is not reduced at the point of the ligament of the tongue, then it would be difficult to maintain the appliance in the mouth. Therefore, it would have been obvious to a person of ordinary skill in the art to reduce the wing at the point of the ligament of the tongue to maintain the appliance in the mouth. Regarding claims 15-17 DeLuke teaches the outer wall 14 on the upper jaw side surface has been continued upwards to the wall surface in such a way that it extends above the gum line (fig. 3), and in relevant range because if measured from the isthmus to the top surface of the appliance is too large, then the appliance would be inappropriate for the user because there would be no passage for saliva to exit the appliance. Further the size of the appliances corresponds increasing the width and the height of the dental arch to make appropriate for young children thru adults (end of col. 2 to col.3), thus outer wall is also increased in terms of height for adult users. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to have provided the wing of DeLuke to the dental appliance of Bergersen'605 for enhancing retention of the appliance into the user's mouth and to encourage users to breath through the nose, and which can serve as a diagnostic aid or test device to access a patient's problems (summary of the invention).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOGESH P. PATEL whose telephone number is (571)270-3646. The examiner can normally be reached on Monday to Thursday about 8 AM- 5 PM Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sam Yao can be reached on 5712721224. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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01/04/2007

/Sam Chuan C. Yao/

Supervisory Patent Examiner, Art Unit 4111